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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/989,682	11/20/2001	Raymond Clarke	13282-2	9733
7590 Sheldon & Mak Suite 900 225 South Lake Avenue Pasadena, CA 91101		10/03/2007	EXAMINER WEINSTEIN, STEVEN L	
			ART UNIT 1761	PAPER NUMBER
			MAIL DATE 10/03/2007	DELIVERY MODE PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

<b>Office Action Summary</b>	<b>Application No.</b>	<b>Applicant(s)</b>	
	09/989,682	CLARKE, RAYMOND	
Examiner	Art Unit		
Steven L. Weinstein	1761		

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

1)  Responsive to communication(s) filed on 14 September 2006.

2a)  This action is **FINAL**.                            2b)  This action is non-final.

3)  Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

4)  Claim(s) 19,21,23,24,29,30,32 and 35-38 is/are pending in the application.  
4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.

5)  Claim(s) \_\_\_\_\_ is/are allowed.

6)  Claim(s) 19,21,23,24,29,30,32 and 35-38 is/are rejected.

7)  Claim(s) \_\_\_\_\_ is/are objected to.

8)  Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

9)  The specification is objected to by the Examiner.

10)  The drawing(s) filed on \_\_\_\_\_ is/are: a)  accepted or b)  objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)  The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

12)  Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a)  All    b)  Some \* c)  None of:  
1.  Certified copies of the priority documents have been received.  
2.  Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
3.  Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

1)  Notice of References Cited (PTO-892)  
2)  Notice of Draftsperson's Patent Drawing Review (PTO-948)  
3)  Information Disclosure Statement(s) (PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_.  
4)  Interview Summary (PTO-413)  
Paper No(s)/Mail Date \_\_\_\_\_.  
5)  Notice of Informal Patent Application  
6)  Other: \_\_\_\_\_.

It is first noted that in a previous communication, two claims were presented that read "31", both appearing to recite the same recitations. The second instance of claim 31 should have been numbered claim 32 and then all the remainder of the claims should have been numbered 33-38 instead of 32-37. Accordingly, the record should read that the second instance of claim 31 (now renumbered claim 32) is canceled, renumbered claims 33 and 34 (formerly 32 and 34) are cancelled, and renumbered claims 35-38 (old 34-37) are currently amended. Such renumbering should be reflected in the next communication.

Claims 19,21,23,24,29,30,32, and 35-38 are rejected under 35USC112, 1<sup>st</sup> and 2<sup>nd</sup> para., as being nonenabling and indefinite.

Claims 19 and 21 recite that the sealed polymeric bag has a certain O2 and ethylene permeability. It is also recited that the polymeric bag includes at least one atmosphere control member comprising a microporous polymeric film and a polymeric coating. It is not clear whether the recited permeabilities are the permeability of the polymeric bag without the control member, or the control member without the rest of the polymeric bag, or the combined plastic bag material plus the control member. What is the relationship between the permeability of the control member and the permeability of the rest of the bag? This issue is relevant since it would appear that the control member would have a different permeability from the rest of the plastic bag. Also, both claims 19 and 21 recite that the packaging atmosphere around the bag is "substantially constant". What does substantially constant mean? That is, there is no time frame for the term constant. For example, is the atmosphere substantially constant from the moment the

bananas are sealed in the bags? Finally, the claim recites the bag contains exogenous ethylene or the "residue" of exogenous ethylene. It is not clear what the latter phrase means. Ethylene is a gas. What is the residue that is left? What is the significance of this recitation in an article claim, especially in regard to any effect on the nature of the characteristics of the bananas?

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

Claims 19,21,23,24,29,30,32, and 35-38 are rejected under 35 U.S.C. 103(a) as being unpatentable over Cummin et al (3,798,333), in view of Herdeman (5,658,607), Badran (3,450,542), Scolaro (Ep 752,378), Badran et al (3,450,544), De Moor (6,013,293), Anderson (4,842,875), Antoon (5,045,331), Shimizu (Jp 57-94244), and applicant's admission of the prior art, further in view of Modern Packaging (40, #2, 1966), Int'l Conference on Controlled Atmosphere Packaging (10/84), Revue Generale DuFroud (no.3 3/1974), Produce Marketing Almanac (1987), Food Technology (9/1988) and CSIRO Food RES Q (44,2,25-33,1984).

In regard to claim 19, Cummin et al ('333) discloses sealed packages that are shipped, and thus are contained in a shipping or trucking container, wherein the sealed packages comprise a polymeric film, bananas within the film, wherein the film has an oxygen, carbon dioxide and ethylene permeability such that the film is able to

store bananas in an O<sub>2</sub> and CO<sub>2</sub> atmosphere within the recited range. As noted previously, applicants admission of the prior art, Badran, Scolaro, Badran et al, De Moor, Anderson and Antoon, all attest to the fact it was notoriously conventional to employ gas permeable packages and modified atmospheres to slow down ripening and increase storage life of all types of produce, including bananas. Cummin et al, Herdeman, Badran, Scolaro, Badran et al, De Moor, Anderson and Antoon, all disclose the permeability of these packages are such that they are more permeable to O<sub>2</sub> than to CO<sub>2</sub>, so as to form or maintain atmospheres within the packages, (when coupled with the respiration rate, weight of produce and other known variables), that are higher than atmospheric air in their CO<sub>2</sub> concentration, and lower than atmospheric air in their O<sub>2</sub> concentration. Modern Packaging (40, #2, 1966), Int'l Conference on Controlled Atmosphere Packaging (10/84), Revue Generale DuFroud (no.3 3/1974), Produce Marketing Almanac (1987), Food Technology (9/1988) and CSIRO Food RES Q (44,2,25-33,1984) are relied on as further evidence of these basic conventional principles of produce preservation with Modern Packaging (40, #2, 1966), Int'l Conference on Controlled Atmosphere Packaging (10/84), Revue Generale DuFroud (no.3 3/1974), further teaching it was well established to create mathematical modeling that takes into account the variables of produce preservation and packaging to create optimal conditions. Applicants have questioned what part of applicants' specification is used as an admission of the prior art. Although it was thought that this was obvious, nevertheless, the specification lists a host of references on page 2, which describe the well known teachings in the art, that low O<sub>2</sub> and high CO<sub>2</sub> slows down respiration and

thus extends the life of produce including bananas. Therefore in view of the fact that the art is replete with evidence, and unequivocally teaches that optimal storage and packaging are a function of such variables as permeability, weight respiration, type of produce , etc. as shown, e.g., by Modern Packaging (40, #2, 1966), and Int'l Conference on Controlled Atmosphere Packaging (10/84), to manipulate the art recognized variables for the particular product such as bananas to extend preservation would have been an obvious routine determination, if indeed not already disclosed by Cummin et al. It is noted that Herdeman further discloses reducing oxygen upon initiation of ripening. It is also noted that the claims do not appear to indicate any time relationship for the gas concentrations. In any case, the art taken as a whole teaches one to manipulate the known variables to provide a low O<sub>2</sub>, high CO<sub>2</sub> atmosphere that will be steady state because the art taken as a whole, which effectively includes all of the references which disclose low O<sub>2</sub> and high CO<sub>2</sub> concentrations, intend those concentrations to be maintained during storage. The art taken as a whole clearly teaches that the variables in produce storage such as oxygen and temperature can be manipulated to achieve optimal results but that lower oxygen and higher carbon dioxide concentrations relative to atmospheric is necessary for all produce. Claim 19 recites a specific amount of bananas. The amount of bananas to be packaged is seen to have been an obvious matter of choice. The art taken as a whole discloses that the weight of the produce is one variable in determining optimal packaging conditions, so that the variables, including weight are obviously adjustable and thus there is seen to be nothing magic and certainly nothing patentable in packaging the recited weight of bananas.

Claims 19 and 21 also recite that the packaging comprises exogenous ethylene or the residue of exogenous ethylene (whatever that means). Cummin discloses the film should be permeable to ethylene since ethylene will be transferred to the packaging atmosphere through the film (col. 3,para. 2). Thus, Cummin et al does teach a package that has exogenous ethylene in the package. As has been previously noted, applicants admission of the prior art, as further evidenced by Shimizu, also discloses that the use of exogenous ethylene (e.g. as a ripening agent) is conventional in the banana storage art. Shimizu adds the agent to the package. It appears that the last communication to the Office questions where this admission is in applicants' specification. The answer is on page 3, para. 1. Claims 19 and 21 also recite that the packaging has an atmosphere control member comprising a microporous polymeric film and a polymeric coating. As noted previously, the use of microporous polymeric film with a polymeric coating thereon for providing a "pathway" for O<sub>2</sub>, CO<sub>2</sub> and ethylene – i.e. a breathable sheet – is shown to have been obvious by DeMoor (e.g., col. 6,para. 1). To modify the combination and employ a conventional gas control member for its art recognized and applicants' intended function would have been obvious. Finally, claims 19 and 21 recite that the sealed bag comprises a sealed bag. Contrary to what is urged, it is not seen that Cummin et al excludes a "bag". Note, too, that once a film encloses a product, whether the film is a bag or not is irrelevant. Stated somewhat differently, the film encloses the product, which is what a bag does. Also, it is noted that the claims do not define any bag type structure. Note, too, that the structure shown in Badran, for example, in fig. 2 would clearly be referred to as a bag, which is indeed what Badran

calls #10. Scolaro, also shows a bag. In regard to claims 23 and 24, which recites that the bananas and the packaging atmosphere are the "sole" contents of the sealed bags, whether one employs a tray or not is seen to have been an obvious matter of choice since it was well established to provide a produce package with or without an inner tray as shown by Cummin et al and Badran. Note, too, Cummin et al discloses that the package atmosphere includes exogenous ethylene which is introduced through the film without thus having an insert. In regard to claims 30 and 36, since Cummin et al discloses the bananas can be stored throughout the entire life cycle, if one chooses, then Cummin et al inherently teaches bananas that have passed the peak of their climacteric. In regard to claims 32,37, and 38, which recite the temperature of the package atmosphere, Cummin et al discloses a temperature of 50F, which is within the recited range. In summary, the art taken as a whole art teach that all of the recited variables, including the weight, type of produce (which affects respiration rate), the gas permeability of the films, the storage temperature, etc., are all interrelated variables in modified atmosphere produce packaging, with the end result being a low O<sub>2</sub> and a high CO<sub>2</sub> atmosphere, and which variables can not only be routinely manipulated to achieve optimal results, but in fact have been mathematically modeled. To therefore select the particular recited values for bananas, if indeed not already shown by Cummin et al, and the art taken as a whole, would therefore have been a matter of routine optimization.

All of applicants remarks filed 9/14/06 have been fully and carefully considered but are not found to be convincing, essentially for the reasons given above. As noted previously, applicants have argued each reference separately as if they were applied

alone in a vacuum. The rejection is based on what the art taken as a whole teaches, and what the art taken as a whole teaches is that the storage life of any produce is a direct function of all of the variables known by the art and in fact manipulated by the art as well as by applicants. The breakdown of how each reference is purported to differ from claims 19 and 21, really misses the point of the rejection, and as such is basically irrelevant. As restated once again above, even if Cummin et al had not taught bananas in a semipermeable packaging system, which packaging system creates or maintains an O<sub>2</sub> concentration within the recited range, a CO<sub>2</sub> concentration within the recited range, a combined O<sub>2</sub> and CO<sub>2</sub> concentration within the recited range, a degree of O<sub>2</sub> and CO<sub>2</sub> permeability to enable the weight of produce to achieve the recited gas atmosphere, a degree of ethylene permeability to allow ethylene in or out, and exogenous ethylene in the package – which, of course, he does – the claims would still have been obvious since, as noted above, and as clearly taught by the art taken as a whole, the art taken as a whole teaches to manipulate these variables and others to achieve optimal results. It appears that it is also urged that either some of the packages in the references do not teach the gas permeability or that the package would be impractical. These urgings also are not directed to the rejection. The rejection has stated that the recited variables are either disclosed in Cummin et al or would have been routinely determinable in view of Cummin et al and the art taken as a whole. The art taken as a whole clearly teaches that type of product, its respiration rate, the temperature, the product weight and the film and its permeability, among other variables, are all interrelated, and equations showing these relationships are present in

the art. Thus, whether Cummin et al does teach the specific permeability or whether or not the film could be employed as a bag (which is the subject of conjecture), the fact is that Cummin et al discloses a gas permeability for his much smaller weight of bananas that produces a gas concentration which is favorable for banana storage and which gas concentration also happens to be within the recited range. Clearly, a much larger weight of bananas would cause a change in the other variables as well, since there would inherently be a greater amount of O<sub>2</sub> intake and a greater amount of CO<sub>2</sub> discharge. Finally, and for the record, it has been urged that the Office action was confusing and that the previous Office action did not address what admissions of prior art were being relied on and what the phrase the art taken as whole referred. Since the points made in the Office were in the nature of exceedingly well known generic statements of facts, presumably known to anyone of ordinary skill in the art, and presumably applicants as well, (note that almost all of the art taken as a whole relied on was cited by applicants on page 2 of their specification), it was assumed that the evidence for these generic teachings would have been clear.

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date

of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Steven Weinstein whose telephone number is (571) 272-1410. The examiner can normally be reached on Monday thru Friday from 7:00 AM to 2:30 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Milton Cano can be reached on (571) 272-1398. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

*Steve Weinstein*  
STEVE WEINSTEIN 1761  
PRIMARY EXAMINER  
9/28/07